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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|------------------------|------------------|
| 10/080,474 | 02/22/2002 | James R. Molnar | 89190.146300/DP-302411 | 8464 |
| 22851 | 7590 | 07/26/2006 | EXAMINER | |
| DELPHI TECHNOLOGIES, INC. | | | GANEY, STEVEN J | |
| M/C 480-410-202 | | | ART UNIT | |
| PO BOX 5052 | | | PAPER NUMBER | |
| TROY, MI 48007 | | | 3752 | |

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/080,474 | Applicant(s) MOLNAR, JAMES R. | |
| | Examiner Steven J. Ganey | Art Unit 3752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the amendment filed on June 22, 2006, which has been fully considered in this action.

2. The indicated allowability of claim 26 is withdrawn in view of the newly discovered reference(s) to Schuldt et al and Cline et al. Rejections based on the newly cited reference(s) follow.

The examiner wishes to apologize at the onset for any inconvenience and difficulty this reopening of prosecution has caused the applicant at this stage of prosecution.

Specification

3. The disclosure is objected to because of the following informalities: On page 7, line 17, the "solenoid body 22" should be the --injector body 22--. On page 7, line 16, the word "coil" should be --solenoid--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 26, line 9, the recitation of "said plurality of components" raises double inclusion issues since in line 3, "at least two of said plurality of components" is recited, however, when looking to the specification and the drawings it is clear that these "at least two of said plurality of components" are the injector body and the solenoid body. It is recommended that language such as --said at least two of-- is inserted before the phrase "said plurality of components".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuldt et al in view of Kosa et al and Cline et al.

Schuldt et al discloses a fuel injector assembly and electric solenoid valve comprising a plurality of components comprising an injector body 18 and solenoid body 14 both formed of ferritic steel, see col. 3, lines 38-58 and col. 4, line 51-53, which are adjacent and joined by welding, see, col. 7, lines 39-41, and a seat assembly 26, except for the ferritic steel being "stabilized" ferritic stainless steel and the seat assembly being formed of martensitic steel. Kosa

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et al discloses a solenoid-quality stabilized ferritic stainless steel alloy that can be used in components for solenoid valves and components of fuel injection systems, see col. 5, lines 5-10. Note that the solenoid-quality stabilized ferritic stainless steel alloy of Kosa et al comprises 15-20% chromium in weight percentage, titanium up to 0.51% in weight percentage, see Table 1 and up to .34% columbium/niobium in weight percentage. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the ferritic stainless steel alloy of Kosa et al for the ferritic steel of Schuldt et al since Kosa et al teaches that the stabilized ferritic stainless steel has good corrosion resistance and is an easily machinable alloy, which is also known by Schuldt et al, see col. 1, lines 20-22. Such a stabilized ferritic stainless steel used in Schuldt et al, as taught by Kosa et al, would perform equally as well in the apparatus of Schuldt et al. Cline et al teaches that it is known that valve seats can be formed of martensitic steel when used in valves, see col. 1, lines 35-38. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the seat assembly 26 of Schuldt et al, as modified by Kosa et al, formed of martensitic steel since Cline et al teaches that martensitic steel is distinguished by its high hardness, which would be advantageous in the apparatus of Schuldt et al, as modified by Kosa et al, due to repeated operation of the fuel injector assembly over its lifetime and the normal wear on the valve assembly.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oda et al shows a valve seat assembly formed of martensitic steel and Park et al discloses a ferritic stainless steel comprising 20-30% wt chromium and 1.5% wt or less titanium.


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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Ganey whose telephone number is 571-272-4899. The examiner can normally be reached on 7:00-5:00; M, Tu, W and Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjg
7/19/06


STEVEN J. GANEY
PRIMARY EXAMINER
7/19/06